

REMARKS

The claims before the examiner for examination are 36, 39-61, 63-78, 81-93 and 95 -98.

The examiner is thanked for his indication of patentable subject matter: claim 36 incorporating the limitations of claims 82, 37 and 96; and claim 88 incorporating the limitations of claims 36, 37, 82 and 96. Applicants are of the view however that they are entitled to broader subject matter. It should be noted that applicants have complied to the extent that former claims 37 and 38 (which was redundant of claim 36) have been incorporated into claim 36. Product claim 88 has been likewise amended. Should the examiner wish to discuss the matter further, the undersigned would welcome the opportunity. Applicants are open to any reasonable suggestions.

Support for the amendments

The amendments to the specification clearly do not add new matter.

Support for the amendment to claim 36 is found in the specification at page 9, lines 3-11. Claims 37 and 38 have been canceled as their subject matter has been incorporated into claim 36. Product claim 88 has likewise been amended.

The issue of incorporation by reference

The paragraph on page 7, lines 15 to 24, has been restored to its original wording, with the exception that the US patent number regarding the identification of V8vEGTDEL-AaIT and the WO patent for the identification of AcMNPV Px1.

Assuming that the subject matter of the paragraph is *essential*, within the

meaning of MPEP 608.01(p) I.A. (page 600-79), the viral pathogens have been properly incorporated by reference. Note, in particular the third of the three proper means for incorporation by reference of essential material: "(3) a pending U.S. application...." (ibid). All of the listed viral pathogens are at least so identified.

Applicants will of course attempt to keep the matters current with respect to US patents which may issue. (It would appear that, at least in this day and age of the WTO, the WO patents, in, and of themselves, should be proper for incorporation by reference.) Each of the viral pathogens have been at least so identified.

The 35 USC 112, second paragraph, rejection of claim 66

It is submitted that the use of the abbreviation DNA and RNA, *in context*, would present no problem for the skilled worker in this art to readily understand. As explained in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd.Pat.App.&Int. 1989):

In rejecting a claim under the second paragraph of 35 USC 112, it is incumbent on the examiner to establish that one of ordinary skill in the pertinent art, when reading the claims in light of the supporting specification, would not have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims.

No such reason is apparent to applicants. Moreover, as explained in *In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (1971) The proper inquiry under the second paragraph...

is merely to determine whether the claims do, in fact set out and circumscribe a particular area with a reasonable degree of precision and particularity. It is here where the definiteness of the language employed must be analyzed --

not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by the ordinarily level of skill in the pertinent art.

Indeed, a simple search of the USPTO Full-Text Database turned up a plethora of hits for the inquiry "DNA viruses." Appended, as Appendix I, is a print out of the first 50 hits.

The rejections under 35 USC § 102

Claims 36-44, 46-48, 52-54, 56, 60, 61, 63-70, 84, 87-89, 92, 23 and 95-98 were rejected under § 102(e) over Rheume (US 5,560,909); and claims 36-61, 63-69, 71-75, 81-93 and 95-98 under § 102(b) over Fakhruddin (EP 0 697 170).

As previously urged in applicants' last amendment, the instant invention relates to a process where a slurry of undissolved polymer is mixed with all of the remaining ingredients and then spray-dried to obtain the desired product. In this way, a coated matrix is obtained. Even when base is used, the polymer is never fully solubilized (page 9, lines 5-10). In contrast, Rheume teaches that the polymer is completely dissolved and then mixed with active ingredient and precipitated to obtain an encapsulated product. In the instant invention, the base is used to partially solubilize the polymer. In Rheume, the base is used to make the polymer precipitate. Thus, neither the process nor the product of the instant invention is taught or suggested by Rheume.

Also, as previously urged by applicants, Fakhruddin selects an amount of base to adjust the pH to about 8.5 to 10 to ensure ready solubilization of the polymer. Thus,

the polymer is no longer partially solubilized and the instant invention is not disclosed in Fakhruddin. The pH modifiers used to keep the preparation below pH 5 as disclosed on page 5, lines 38-44, relate to modifiers to keep the tank mix pH at an acceptable level. This relates to a time after the insecticidal matrix of the instant invention is made and does not relate to the process for making the matrix. Furthermore, Fakhruddin teaches away from the instant invention by teaching that it is necessary to have solubilization and so does not suggest the instant claimed invention.

As explained, inter alia, in *Verdegaal Brothers, Inc. v. Union Oil Co.*, 814 F.2d 628, 2 USPQ2d 1051, 1053 (Fed.Cir. 1987), "A claim is anticipated only if each and every element of a claim as set forth in the claim is found either expressly or inherently described, in a single prior art reference. [Citations omitted.]" This has not been shown to be the case with Rheaume or Fakhruddin.

"Picking and choosing" among the many possibilities, utilizing a reference's encyclopedic nature, is improper to establish anticipation within the meaning of § 102. See *Air Products and Chemicals, Inc. v. Chas. S. Tanner Co. et al.*, 219 USPQ 223, 231 (DC SC 1983), citing, *In re Arkley*, 455 F.2d 586, 172 USPQ 524 (CCPA 1972) and *In re Samour*, 571 F.2d 559, 562, 197 USPQ 1, 3-4 (CCPA 1978).

Certainly, the references do not anticipate the subject matter, within the meaning of § 102, particular in light of the present amendments.

The rejections under 35 USC § 103

Claims 36-61, 63-78, 81-93 and 95-98 were rejected over Miller (US 5,662,897)

or Bohm et al (US 4,948,586) or Fakhruddin (supra) in view of Rheaume (supra).

Both Fakhruddin and Rheaume have been discussed above.

Miller et al. disclose in Example 5 that the polyhedrin inclusion bodies are coated using an aqueous coating procedure. In their aqueous coating procedure, the Eudragit S100 is dissolved by adjusting the pH to between 9.0 and 9.5. In contrast, applicants do not prepare their pesticidal matrices by completely dissolving a pH-dependent polymer. Applicants' process requires that the pH of their aqueous mixture be below the solubilization pH of the pH-dependent polymer. Furthermore, the pesticidal matrices produced by applicants' process differ from the coated product produced by Miller et al. because a substantial number (about 90% or more) of the free carboxylic acid groups in applicants' pH-dependent polymer have not been converted to their salt form. In contrast, a significant number of the free carboxylic acid groups in Miller et al.'s polymer will be present in the coated product in their salt form by virtue of their process which solubilizes the coating polymer.

Miller et al. does not render the claims obvious since there is no indication of the desirability of using an incompletely solubilized polymer in their teachings. Applicants' process requires that "... the pH of the aqueous mixture be below the solubilization pH of the pH-dependent polymer..." (claim 1, lines 7-8). In addition, a substantial number of the free carboxylic acid groups (about 90% or more) in the pH-dependent polymer of applicants' pesticidal matrices have not been converted to their salt form. Nothing in Miller et al. hints at applicants' distinctly different process.

Bohm discloses a microcapsule analogous to a gelatin ball having a hard coating which progressively becomes softer towards the center, wherein the insecticidal pathogen is located in a gelatinous material which is soft, viscous and composed of water, polymer and sunscreens agent. There is no water required by applicants' claims. The instant claimed matrix does not require all the limitations of the Bohm disclosure and, accordingly, Bohm does not anticipated applicants' claims.

While Bohm may provide for partially solubilized polymers, the polymers are dissolved in organic solvent in the disclosed process. Bohm sets forth at least three variations of a process to make the microcapsule. Bohm does not disclose or suggest making product in an aqueous mixture of partially solubilized polymer.

Lacking from this combination of references is the reason or motivation for their combination in such a manner as to render obvious the invention as now claimed by applicants. Lacking is the necessary *objective* evidence.

As most recently explained by the court in *In re Sang Su* (No. 00-1158) (Copy appended as Appendix II), the PTO must still provide "objective evidence of record to support a suggestion to combine references....This factual question [of motivation to combine] is material to patentability, and could not be resolved on subjective belief and unknown authority." See also *In re Fitch*, 974 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed.Cir. 1992) (PTO must show "objective teaching" for the combination.)

Conclusion

For the reasons discussed above allowance is respectfully solicited. If the


SUN et al., Serial No. 09/094,279

examiner does not agree however, it is respectfully requested that the amendments to the disclosure and claims be enter to place this application in better condition for appeal.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE
IN THE SPECIFICATION

Amend the paragraph on page 7, lines 15-24, as follows:

AcMNPC E2 is described in EP 621337, and co-pending U.S. Serial No. 08/009,264, filed January 25, 1993, which is incorporated herein by reference.

AcMNPV V8 and V8vEGTDEL are described in U.S. Patent 5,662,897 which is incorporated herein by reference. V8vEGTDEL-AaIT is described in EP 697170-A1 and co-pending U.S. Serial No. 08/322,679, filed July 27, 1994, now US Patent 5,965,123.

AcMNPV Px1 is described in co-pending provisional U.S. Serial No. 60/084,705, filed May 8, 1998, WO 99/58705 which is incorporated herein by reference.

IN THE CLAIMS

Cancel claims 37 and 38.

Amend claims 36 and 88 as follows:

36. (three times amended) A process comprising

- (a) preparing an aqueous mixture containing a pesticidal agent, a pH-dependent polymer, a base, optionally a plasticizer, optionally an ultraviolet protector, optionally an activity enhancer, optionally a glidant, and water;

wherein the polymer

- (1) contains ester groups and free carboxylic acid groups,
(2) is partially solubilized due to the action of the base, and

- (3) has solubilization pH greater than about pH 5.5, and wherein the amount of base added is well below the amount required to fully solubilize the copolymer such that no more than 10% of the free carboxylic acid groups of the copolymer are converted to salts;

wherein the mixture's pH is less than the polymer's solubilization; and

- (b) drying the mixture to produce a pesticidal matrix.

88. (four times amended) A pesticidal matrix comprising on a percentage-weight-basis of the matrix, from about 1% to about 50% of a pesticidal agent, from about 5% to about 50% of a pH-dependent polymer, from about 0% to about 25% of a plasticizer, from about 0% to about 30% of a ultraviolet protector, from about 0% to about 75% of a activity enhancer, and from about 0% to about 15% of a glidant; wherein the polymer contains ester groups and free carboxylic acid groups, is partially solubilized due to the action of a base, and has a solubilization pH greater than about pH 5.5, and wherein the amount of base utilized is well below the amount required to fully solubilize the copolymer such that no more than 10% of the free carboxylic acid groups of the copolymer are converted to salts.